

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix and a source driver, and a gate driver that drive the active matrix circuit; and

an opposing substrate comprising an opposing electrode,

wherein the liquid crystal display device is characterized as:

performing display by optically compensated bend mode, and

conducting voltage gray scale method and time ratio gray scale at the same time by using n bit out of m bit digital data as information for voltage gray scale, and only (m-n) bit as information for time ratio gray scale, wherein m and n are positive numbers equal to or greater than 2 and satisfy $m > n$.

Cancel Claim 2

3(Amended). A liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix and a source driver and a gate driver that drive the active matrix circuit;

an opposing substrate comprising an opposing electrode; and

a circuit which converts m bit digital video data inputted from the external into n bit digital video data and provides the n bit digital video data to the source driver, wherein m and n are positive numbers equal to or greater than 2 and satisfy $m > n$,

wherein the liquid crystal display device is characterized as:

forming an image for one frame image comprising 2^{m-n} subframes by performing voltage gray scale method and time ratio gray scale that uses only (m-n) bit at the same time, and;

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applying voltage which makes an orientation of liquid crystal to a bend orientation on starting display of the 2^{m-n} subframes.

Cancel Claim 4

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~~5 (Amended). A liquid crystal display device comprising:~~
~~an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix and a source driver and a gate driver that drive the active matrix circuit;~~
~~and~~
~~a circuit which converts m bit digital video data inputted from the external into n bit digital video data and provides the n bit digital video data to the source driver, wherein m and n are positive numbers equal to or greater than 2 and satisfy $m > n$,~~
~~wherein the liquid crystal display device is characterized as:~~
~~forming an image for one frame image comprising 2^{m-n} subframes by performing voltage gray scale method and time ratio gray scale that uses only (m-n) bit at the same time;~~
~~applying voltage which makes an orientation of liquid crystal to a bend orientation on starting display of the frame which comprises 2^{m-n} subframes.~~

Cancel Claim 6.

7. A liquid crystal display device according to claim 1, wherein the positive number m is 10 and the positive number n is 2.

Cancel Claim ~~8.~~

9. A liquid crystal display device according to claim 3, wherein the positive number m is 10 and the positive number n is 2.

Cancel Claim ~~10.~~

11. A liquid crystal display device according to claim 5, wherein the positive number m is 10 and the positive number n is 2.

Cancel Claim ~~12.~~

13. A liquid crystal display device according to claim 1, wherein the positive number m is 12 and the positive number n is 4.

Cancel Claim ~~14.~~

15. A liquid crystal display device according to claim 3, wherein the positive number m is 12 and the positive number n is 4.

Cancel Claim ~~16.~~

17. A liquid crystal display device according to claim 5, wherein the positive number m is 12 and the positive number n is 4.

Cancel Claim 18.

19. A rear projector which comprises 3 liquid crystal display devices according to claim 1.

Cancel Claim 20.

21. A rear projector which comprises 3 liquid crystal display devices according to claim 3.

Cancel Claim 22.

23. A rear projector which comprises 3 liquid crystal display devices according to claim 5.

Cancel Claim 24.

25. A front projector which comprises 3 liquid crystal display devices according to claim 1.

26. A front projector which comprises 3 liquid crystal display devices according to claim 2.

27. A front projector which comprises 3 liquid crystal display devices according to claim 3.

28. A front projector which comprises 3 liquid crystal display devices according to claim 4.

29. A front projector which comprises 3 liquid crystal display devices according to claim 5.

30. A front projector which comprises 3 liquid crystal display devices according to claim 6.

49. A notebook type personal computer which comprises a liquid crystal display device according to claim 1.

Cancel Claim 50.

51. A notebook type personal computer which comprises a liquid crystal display device according to claim 3.

Cancel Claim 52.

53. A notebook type personal computer which comprises a liquid crystal display device according to claim 5.

Cancel Claim 54.

Please add the following new claims:

55(New). A liquid crystal display device comprising:

a first substrate;

a plurality of pixel thin film transistors disposed in a matrix form over the substrate;

a source driver operationally connected to said plurality of pixel thin film transistors;

an opposing substrate provided with an opposing electrode; and

a liquid crystal layer interposed between the first substrate and the opposing electrode, said liquid crystal layer having a p cell structure; and

a digital video data time ratio gray scale processing circuit, operationally connected to said source driver,

wherein a m bit digital video data inputted to the digital video data time ratio gray scale processing circuit is converted into an n bit digital video data for voltage gray scale while only (m - n) bit data of the m bit digital video data is used for time ratio gray scale.

56(New). The liquid crystal display device according to claim 55 wherein said liquid crystal display device is operated in an OCB mode.

57(New). A method of driving a liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel TFTs are disposed in a matrix and a source driver, and a gate driver that drive the active matrix circuit; and

an opposing substrate comprising an opposing electrode,

wherein the method of driving the liquid crystal display device is characterized as:

performing display by optically compensated bend mode, and

conducting voltage gray scale method and time ratio gray scale at the same time by using n bit out of m bit digital data as information for voltage gray scale, and only (m-n) bit as information for time ratio gray scale, wherein m and n are positive numbers equal to or greater than 2 and satisfy $m > n$.

58(New). A method of driving a liquid crystal display device comprising:

an active matrix substrate comprising an active matrix circuit in which a plurality of pixel